



# Springcroft Primary School

## Computing Policy

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Approved	Signature	Date

### Our Mission Statement:

The place to learn, the place to succeed, the place to make friends, the place to grow.

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## **Purpose of study**

A high-quality computing education equips pupils to use computational thinking and creativity to help understand and change the world. Computing has deep links with mathematics, science, design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

## **Aims**

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

## **Teaching and learning**

To support the aims of Computing in equipping children with the skills necessary to use technology and to become independent learners, the teaching style that we adopt is as practical as possible.

The focus of our teaching in Computing lessons is for individuals or groups of children to use computers to support them with their learning. For example, children may research English topics by using an e-book, or they may choose to investigate a particular issue using the Internet. Children who are learning to analyse and present data in mathematics may use a computer and relevant software to do this.

We continuously encourage the children to investigate ways in which the use of computing can improve their final piece of work, for example, editing a piece of writing using word processing software and then using the internet to find a suitable image to enhance the piece of writing further, of which skills have been discretely taught through our curriculum.

## **Curriculum Planning**

At Springcroft, we use the National Curriculum scheme and attainment objectives as a basis for planning alongside units of work from the Twinkl Computing Scheme. Both

documents allow a progression of skills through each year group and allow Teachers to plan for all children of varying abilities.

The topics studied in Computing are planned to build upon prior learning, developing skills year on year. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they progress through school. This is demonstrated through our progression of skills plan, documenting the progressive nature across the year groups.

Online safety is taught through specific half-term lessons covering particular topics relevant to the age group of the children.

### **Early Years Foundation Stage Pupils are taught to:**

- Children are taught to recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. The children have regular access to computers, the IWB and the school's computer suite. A focus in the EYFS year is based around 'Computer skills', particularly mouse control, allowing a smooth transition to the KS1 curriculum.

### **Key Stage 1 Pupils are taught to:**

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

### **Key Stage 2 Pupils are taught to:**

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

### **Cross-Curricular Links**

Computing naturally lends itself to a cross-curricular approach and can be used to enhance and develop a variety of subjects. Where possible, teachers incorporate Computing into other areas alongside discrete timetabled sessions. The order in which units are delivered are also considered to support this area as part of the school's long-term curriculum offer.

### **Equal Opportunities**

Teachers ensure that all pupils have access to the curriculum and make the best possible progress in the subject. The use of differentiation by outcome allows children to respond to a challenge at their appropriate level, teachers can then scaffold or extend learning opportunities to suit. Each lesson has a clear objective, and a differentiated outcome based on a pupil's starting point.

### **Assessment**

Children are assessed using formative teacher assessments, using evidence of pupils' work at the end of a lesson or series of lessons. Teachers can then plan to develop these outcomes over the unit of work being studied. Child-led assessments for each unit of work are crucial in supporting these judgments and are recorded each lesson by the children using the outcomes of the session. Teachers use these assessments to make an overarching end-of-year judgement using the terminology of 'working towards' or 'expected'. This allows attainment to be reported to parents at the end of the summer term and is also available to the teaching staff and the curriculum lead. This allows teachers to be more aware of the starting points and any pupils that require further support.

### **Internet and Online Safety policies**

The school has an up-to-date Online Safety policy which directs the safe use of the Internet. All members of staff in school are aware of these policies. An online safety policy operates within school for the protection of both children and staff. Online safety is taught

throughout the curriculum and also through a discrete lesson each half term covering a variety of topic areas relevant to the age group.

### **Monitoring and Review**

The coordination and planning of the computing curriculum are the responsibility of the subject leader who regularly attends CPD/ training and network meetings, allowing them to keep informed about current developments in the teaching and learning of computing and by providing a strategic led and direction for this subject. Subject Monitoring takes place termly when lesson observations and feedback take place, along with pupil voice and the monitoring of children's work.